

# METHOD AND APPARATUS FOR ACCELERATING HARDWARE SIMULATION

## Abstract

5 A method for accelerating hardware simulation is presented wherein cycle based  
simulations of digital system designs are generated by raising the level of abstraction in a  
hardware simulation environment. Behavioral models of the digital system components are  
created in a high level general purpose programming language. Function calls created in a high  
level general purpose programming language provide a transaction based communication  
10 interface. During a simulation of the system design, the behavioral models communicate with  
each other through the transaction based communication interface. Additionally, the behavioral  
models employ an execute and update method of instruction processing that generates cycle  
accurate information for the simulation.